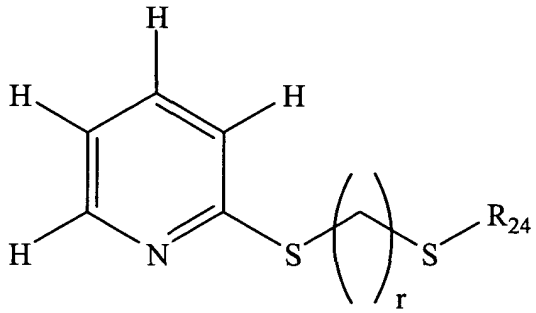
AMENDMENT TO THE SPECIFICATION

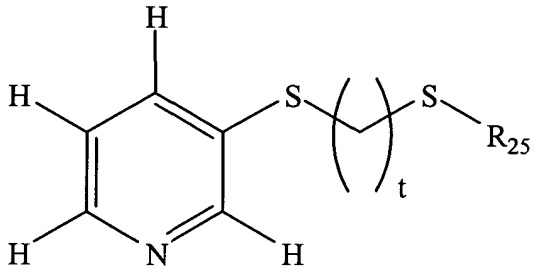
On page 8 of the application, after the last line of paragraph [0010] and prior to the first line of paragraph [0011], please insert the following:

[0010.1] In one embodiment, the promotor component is



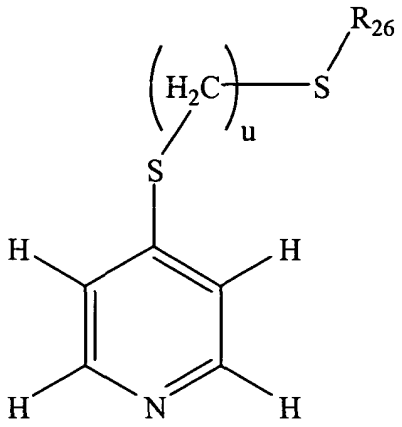
wherein R_{24} is a hydrogen atom or a sulfur-protecting functionality which is one member selected from the group consisting of an aliphatic functionality comprising at least about 4 carbon atom, an ester functionality comprising between about 1 and about 11 carbon atoms, a carbonate functionality comprising between about 1 and about 11 carbon atoms, and a benzylic functionality comprising at least about 7 carbon atoms which is attached via the benzylic methylene carbon; and wherein r is 3 or 6.

[0010.2] In another embodiment, the promoter component is,



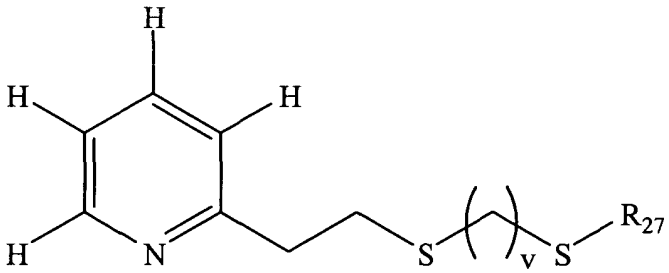
wherein R_{25} is a hydrogen atom or a sulfur-protecting functionality which is one member selected from the group consisting of an aliphatic functionality comprising at least about 4 carbon atom, an ester functionality comprising between about 1 and about 11 carbon atoms, a carbonate functionality comprising between about 1 and about 11 carbon atoms, and a benzylic functionality comprising at least about 7 carbon atoms which is attached via the benzylic methylene carbon; and wherein t is 3 or 6.

[0010.3] In yet another embodiment, the promoter component is



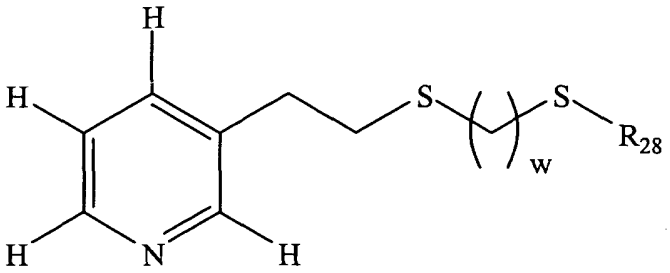
wherein R_{26} is a hydrogen atom or a sulfur-protecting functionality which is one member selected from the group consisting of an aliphatic functionality comprising at least about 4 carbon atom, an ester functionality comprising between about 1 and about 11 carbon atoms, a carbonate functionality comprising between about 1 and about 11 carbon atoms, and a benzylic functionality comprising at least about 7 carbon atoms which is attached via the benzylic methylene carbon; and wherein u is 3 or 6.

[0010.4] In yet another embodiment, the promoter component is



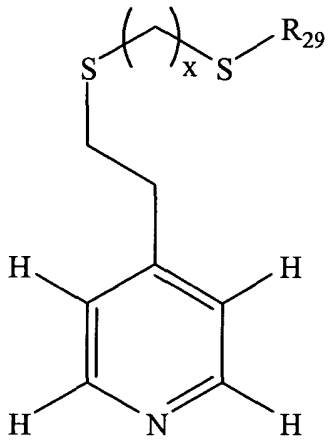
wherein R_{27} is a hydrogen atom or a sulfur-protecting functionality which is one member selected from the group consisting of an aliphatic functionality comprising at least about 4 carbon atom, an ester functionality comprising between about 1 and about 11 carbon atoms, a carbonate functionality comprising between about 1 and about 11 carbon atoms, and a benzylic functionality comprising at least about 7 carbon atoms which is attached via the benzylic methylene carbon; and wherein v is 3 or 6.

[0010.5] In yet another embodiment, the promoter component is,



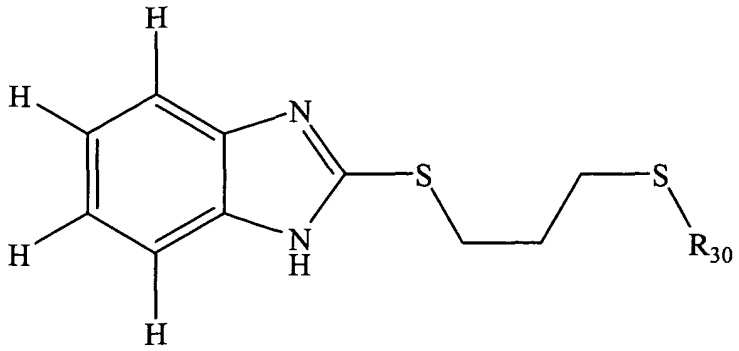
wherein R_{28} is a hydrogen atom or a sulfur-protecting functionality which is one member selected from the group consisting of an aliphatic functionality comprising at least about 4 carbon atom, an ester functionality comprising between about 1 and about 11 carbon atoms, a carbonate functionality comprising between about 1 and about 11 carbon atoms, and a benzylic functionality comprising at least about 7 carbon atoms which is attached via the benzylic methylene carbon; and wherein w is 3 or 6.

[0010.6] In yet another embodiment, the promoter component is



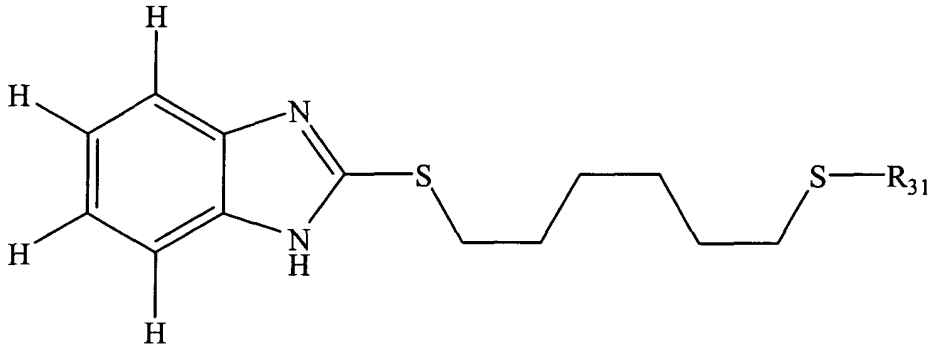
wherein R_{29} is a hydrogen atom or a sulfur-protecting functionality which is one member selected from the group consisting of an aliphatic functionality comprising at least about 4 carbon atom, an ester functionality comprising between about 1 and about 11 carbon atoms, a carbonate functionality comprising between about 1 and about 11 carbon atoms, and a benzylic functionality comprising at least about 7 carbon atoms which is attached via the benzylic methylene carbon; and wherein x is 3 or 6.

[0010.7] In yet another embodiment, the promoter component is,



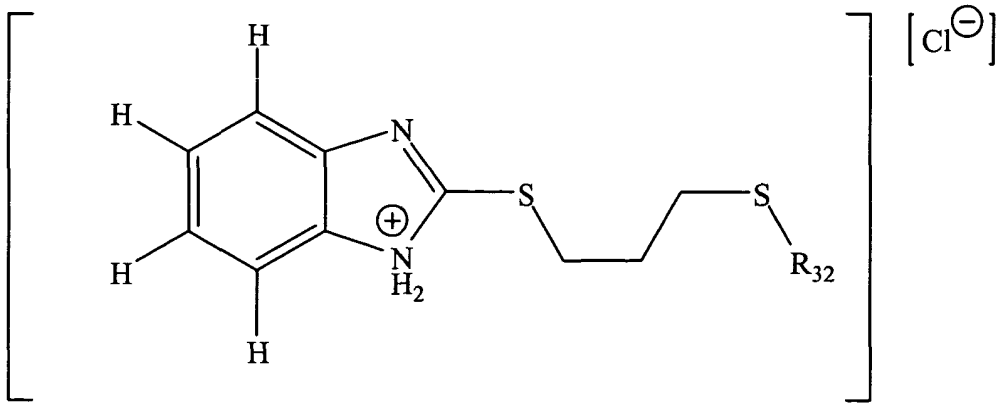
wherein R_{30} is a hydrogen atom or a sulfur-protecting functionality which is one member selected from the group consisting of an aliphatic functionality comprising at least about 4 carbon atom, an ester functionality comprising between about 1 and about 11 carbon atoms, a carbonate functionality comprising between about 1 and about 11 carbon atoms, and a benzylic functionality comprising at least about 7 carbon atoms which is attached via the benzylic methylene carbon.

[0010.8] In yet another embodiment, the promoter component is,



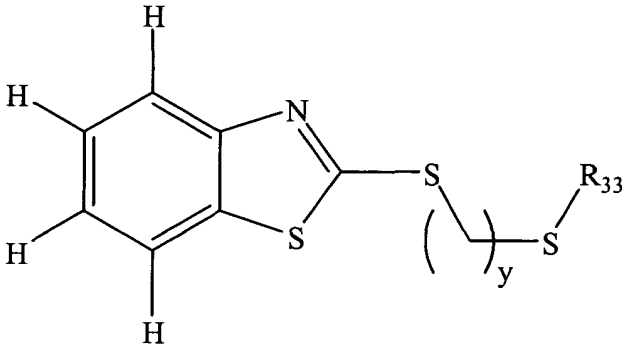
wherein R_{31} is a hydrogen atom or a sulfur-protecting functionality which is one member selected from the group consisting of an aliphatic functionality comprising at least about 4 carbon atom, an ester functionality comprising between about 1 and about 11 carbon atoms, a carbonate functionality comprising between about 1 and about 11 carbon atoms, and a benzylic functionality comprising at least about 7 carbon atoms which is attached via the benzylic methylene carbon.

[0010.9] In yet another embodiment the promoter component is,



wherein R_{32} is a hydrogen atom or a sulfur-protecting functionality which is one member selected from the group consisting of an aliphatic functionality comprising at least about 4 carbon atom, an ester functionality comprising between about 1 and about 11 carbon atoms, a carbonate functionality comprising between about 1 and about 11 carbon atoms, and a benzylic functionality comprising at least about 7 carbon atoms which is attached via the benzylic methylene carbon.

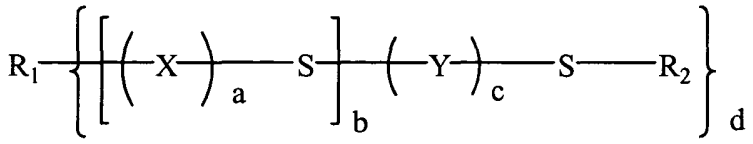
[0010.10] In yet another embodiment, the promoter component is,



wherein R_{33} is a hydrogen atom or a sulfur-protecting functionality which is one member selected from the group consisting of an aliphatic functionality comprising at least about 4 carbon atom, an ester functionality comprising between about 1 and about 11 carbon atoms, a carbonate functionality comprising between about 1 and about 11 carbon atoms, and a benzylic functionality comprising at least about 7 carbon atoms which is attached via the benzylic methylene carbon; and wherein y is 3 or 6.

On page 10 of the application, after the last line of paragraph [0013] and prior to the first line of paragraph [0014], please insert the following:

[0013.1] In one embodiment, a method for producing a catalyst composition which catalyzes the formation of bisphenols from aromatic hydroxy compounds and carbonyl containing compounds comprises the step of attaching a poly-sulfur mercaptan promoter component to a solid acid support component comprising a protic acid functionality, wherein the poly-sulfur mercaptan promoter component has the following structure (I),



(I)

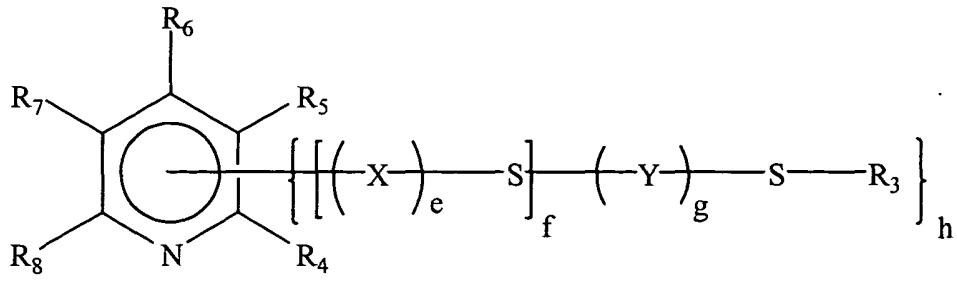
wherein R_1 is a functionality selected from the group consisting of a positively charged ammonium functionality, a positively charged guanidinium functionality, a positively charged phosphonium functionality, and a neutral amine; wherein a is between about 0 and about 11; wherein b is between about 1 and about 11; wherein c is between about 1 and about 11; wherein d is between about 1 and about 5; wherein X is a linking functionality which is one member selected from the group consisting of a linear aliphatic chain comprising between about 1 and about 11 carbon atoms, a cyclic aliphatic ring comprising at least 5 carbon atoms, a cyclic aromatic ring comprising at least 6 carbon atoms, a cyclic aliphatic heterocycle comprising at least 3 carbon atoms, and a cyclic aromatic heterocycle comprising at least 3 carbon atoms; wherein Y is a linking functionality which is one member selected from the group consisting of a linear aliphatic chain comprising between about 1 and about 11 carbon atoms, a cyclic aliphatic ring comprising at least 5 carbon atoms, a cyclic aromatic ring comprising at least 6 carbon atoms, a cyclic aliphatic heterocycle comprising at least 3 carbon atoms, and a cyclic aromatic heterocycle comprising at least 3 carbon atoms; and wherein R_2 is one member selected from the group consisting of a hydrogen, a secondary aliphatic functionality, a tertiary aliphatic functionality, an ester functionality, a carbonate functionality, and a benzyl functionality which is attached via the benzylic methylene carbon.

[0013.2] In the structure (I) above, the tertiary aliphatic functionality is one member selected from the group consisting of a branched aliphatic functionality, and a

cyclic aliphatic functionality. Further, the R_2 functionality is one member selected from the group consisting of an isopropyl functionality, an isobutyl functionality, a tertiary butyl functionality, a tertiary amyl functionality, a cyclopentyl functionality, a benzyl, a 4-methoxybenzyl functionality, a 1-methylcyclohexyl functionality, and a cyclohexyl functionality. The ester functionality is one member selected from the group consisting of an acetate functionality, a propionate functionality, and a benzoate functionality. The carbonate functionality is one member selected from the group consisting of an alkyl carbonate functionality, and an aromatic carbonate functionality.

[0013.3] In an exemplary embodiment, the bisphenol which is being formed is 4,4'-isopropylidenediphenol. The carbonyl containing compound is a ketone or an aldehyde. A preferred carbonyl compound is acetone. A preferred aromatic hydroxy compound is phenol. It is generally desired for the attachment step to be performed in an aqueous solution comprising water. In one embodiment, the solid acid in structure (I) comprises at least one member selected from the group consisting of polystyrene, a zeolite, and silica. In another embodiment, the solid acid is a sulfonic acid functionalized polymeric acid, wherein the polymeric resin further comprises divinylbenzene in an amount of up to about 12 wt% of the total weight of the polymeric resin. In another embodiment, the solid acid in structure (I) comprises a protic acid functionality having at least one member selected from the group consisting of a sulfonic acid functionality, a phosphonic acid functionality, and a carboxylic acid functionality.

[0013.4] In one embodiment, a method for producing a catalyst composition which catalyzes the formation of bisphenols from aromatic hydroxy compounds and carbonyl containing compounds comprises the step of attaching a poly-sulfur mercaptan promoter component to a polymeric resin component comprising a protic acid functionality. The functionalized poly-sulfur mercaptan promoter may be a pyridine mercaptan having the following the structure (II),



(II)

wherein e is between about 0 and about 11; wherein f is between about 1 and about 11;

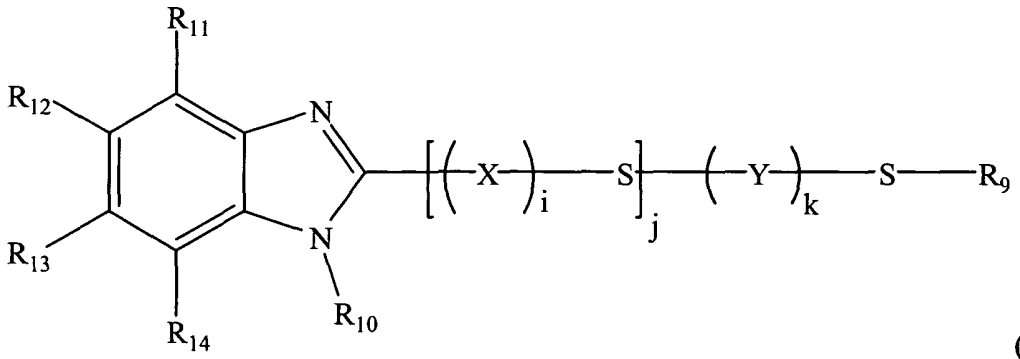
wherein g is between about 1 and about 11;wherein h is between about 1 and about 5;

wherein X is a linking functionality which is one member selected from the group consisting of a linear aliphatic chain comprising between about 1 and about 11 carbon atoms, a cyclic aliphatic ring comprising at least 5 carbon atoms, a cyclic aromatic ring comprising at least 6 carbon atoms, a cyclic aliphatic heterocycle comprising at least 3 carbon atoms, and a cyclic aromatic heterocycle comprising at least 3 carbon atoms;

wherein Y is a linking functionality which is one member selected from the group consisting of a linear aliphatic chain comprising between about 1 and about 11 carbon atoms, a cyclic aliphatic ring comprising at least 5 carbon atoms, a cyclic aromatic ring comprising at least 6 carbon atoms, a cyclic aliphatic heterocycle comprising at least 3 carbon atoms, and a cyclic aromatic heterocycle comprising at least 3 carbon atoms; wherein R_3 is a hydrogen or a sulfur-protecting functionality which is one member selected from the group consisting of an aliphatic functionality comprising at least about 4 carbon atom, an ester functionality comprising between about 1 and about 11 carbon atoms, a carbonate functionality comprising between about 1 and about 11 carbon atoms, and a benzylic functionality comprising at least about 7 carbon atoms which is attached to the terminal sulfur atom via the benzylic methylene carbon; and wherein at least one member selected from the group consisting of R_4, R_5, R_6, R_7, and R_8 is a $\{[(X)_eS]_f[(Y)_gS\text{-}R_3]\}$ chain, and each of R_4, R_5, R_6, R_7, and R_8 that is not a $\{[(X)_eS]_f[(Y)_gS\text{-}R_3]\}$ chain is independently one member selected from the group consisting of a hydrogen, a fluoride, a bromide, a chloride, an iodide, a vinyl group, a hydroxide, an alkoxide functionality comprising between about 1 and about 11 carbon atoms, an aryloxide functionality

comprising at least about 6 carbon atoms, an aliphatic functionality comprising between about 1 and about 11 carbon atoms, an aromatic functionality comprising at least about 6 carbon atoms, a cycloaliphatic ring comprising at least about 5 carbon, said cycloaliphatic ring being fused to the pyridine ring through an adjacent ring substituent, and a cycloaromatic ring comprising at least about 6 carbon atoms, said cycloaromatic ring being fused to the pyridine ring through an adjacent ring substituent. In one embodiment in the structure (II) above, X is a $-CH_2-$ group, e is 2, f is 1, Y is a $-CH_2-$ group, g is 3, and R_4 is the $\{[(X)_eS]_f[(Y)_gS\text{-}R_3]\}$ chain in structure. In another embodiment in the structure (II) above, X is a $-CH_2-$ group, e is 2, f is 1, Y is a $-CH_2-$ group, g is 3, and R_5 is the $\{[(X)_eS]_f[(Y)_gS\text{-}R_3]\}$ chain. In yet another embodiment in the structure (II) above, X is a $-CH_2-$ group, e is 2, f is 1, Y is a $-CH_2-$ group, g is 3, and R_6 is the $\{[(X)_eS]_f[(Y)_gS\text{-}R_3]\}$ chain.

[0013.5] In one embodiment, the poly-sulfur mercaptan promoter component is a functionalized benzimidazole mercaptan, wherein the functionalized benzimidazole mercaptan has the structure (III),

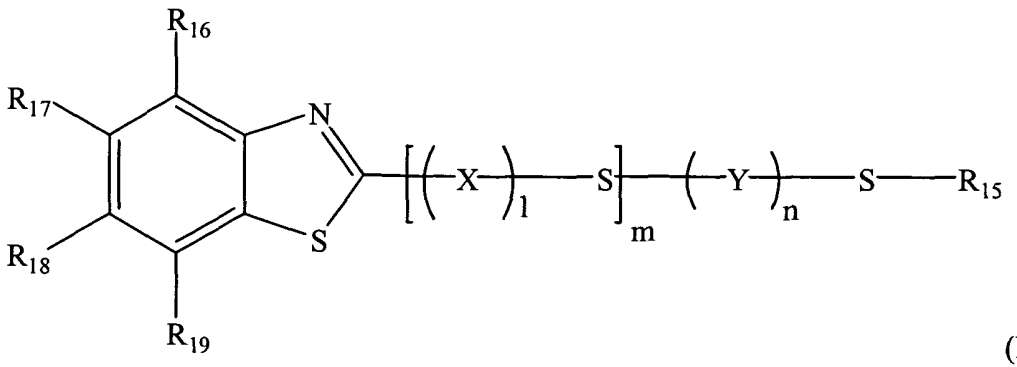


(III)

wherein i is between about 0 and about 11; wherein j is between about 1 and about 11; wherein k is between about 1 and about 11; wherein R_9 is a hydrogen atom or a sulfur-protecting functionality which is one member selected from the group consisting of an aliphatic functionality comprising at least about 4 carbon atom, an ester functionality comprising between about 1 and about 11 carbon atoms, a carbonate functionality comprising between about 1 and about 11 carbon atoms, and a benzylic functionality comprising at least about 7 carbon atoms which is attached to the terminal sulfur atom via the benzylic methylene carbon; wherein R_{10} is one member selected from the group

consisting of a hydrogen, an aliphatic carbonyl functionality comprising about 1 to about 11 carbon atoms, an aliphatic functionality comprising between about 1 and about 11 carbon atoms, an aromatic carbonyl functionality comprising at least about 7 carbon atoms, and an aromatic functionality comprising at least about 6 carbon atoms; and wherein each of R_{11}, R_{12}, R_{13} and R_{14} are independently one member selected from the group consisting of a hydrogen, a fluoride, a bromide, a chloride, an iodide, a vinyl group, a hydroxide, an alkoxide functionality comprising between about 1 and about 11 carbon atoms, an aryloxide functionality comprising at least about 6 carbon atoms, an aliphatic functionality comprising between about 1 and about 11 carbon atoms, an aromatic functionality comprising at least about 6 carbon atoms, a cycloaliphatic ring comprising at least about 5 carbon atoms, said cycloaliphatic ring being fused to the benzimidazole arene ring through an adjacent ring substituent, and a cycloaromatic ring comprising at least about 6 carbon atoms, said cycloaromatic ring being fused to the benzimidazole arene ring through an adjacent ring substituent.

[0013.6] In another embodiment, the poly-sulfur mercaptan promoter component is a functionalized benzothiazole mercaptan, wherein the functionalized benzothiazole mercaptan has the structure (IV),



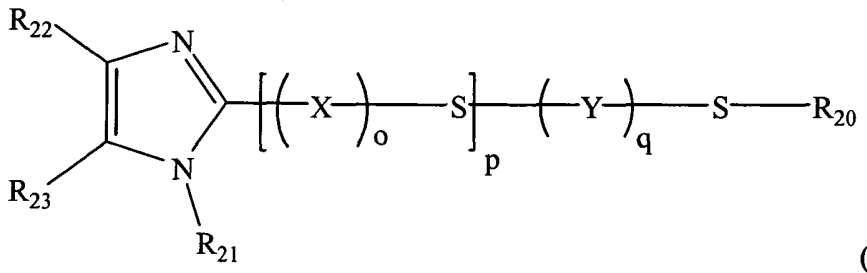
(IV)

wherein l is between about 0 and about 11; wherein m is between about 1 and about 11;

wherein n is between about 1 and about 11; wherein R_{15} is a hydrogen atom or a sulfur-protecting functionality which is one member selected from the group consisting of an aliphatic functionality comprising at least about 4 carbon atom, an ester functionality comprising between about 1 and about 11 carbon atoms, a carbonate functionality

comprising between about 1 and about 11 carbon atoms, and a benzylic functionality comprising at least about 7 carbon atoms which is attached to the terminal sulfur atom via the benzylic methylene carbon; and wherein each of R_{16}, R_{17}, R_{18}, and R_{19} are independently one member selected from the group consisting of a hydrogen, a fluoride, a bromide, a chloride, an iodide, a vinyl group, a hydroxide, an alkoxide functionality comprising between about 1 and about 11 carbon atoms, an aryloxide functionality comprising at least about 6 carbon atoms, an aliphatic functionality comprising between about 1 and about 11 carbon atoms, an aromatic functionality comprising at least about 6 carbon atoms, a cycloaliphatic ring comprising at least about 5 carbon atoms, said cycloaliphatic ring being fused to the benzothiazole arene ring through an adjacent ring substituent, and a cycloaromatic ring comprising at least about 6 carbon atoms, said cycloaromatic ring being fused to the benzothiazole arene ring through an adjacent ring substituent.

[0013.7] In another embodiment, the poly-sulfur mercaptan promoter component is a functionalized imidazole mercaptan, wherein the functionalized imidazole mercaptan has the structure (V),



(V)

wherein o is between about 0 and about 11; wherein p is between about 1 and about 11;

wherein q is between about 1 and about 11; wherein R_{20} is a hydrogen atom or a sulfur-protecting functionality which is one member selected from the group consisting of an aliphatic functionality comprising at least about 4 carbon atom, an ester functionality comprising between about 1 and about 11 carbon atoms, a carbonate functionality comprising between about 1 and about 11 carbon atoms, and a benzylic functionality comprising at least about 7 carbon atoms which is attached to the terminal sulfur atom via the benzylic methylene carbon; wherein R_{21} is one member selected from the group

consisting of a hydrogen, an aliphatic carbonyl functionality comprising about 1 to about 11 carbon atoms, an aliphatic functionality comprising between about 1 and about 11 carbon atoms, an aromatic carbonyl functionality comprising at least about 7 carbon atoms, and an aromatic functionality comprising at least about 6 carbon atoms; and

wherein each of R_{22} and R_{23} are independently one member selected from the group consisting of a hydrogen, a fluoride, a bromide, a chloride, an iodide, a vinyl group, a hydroxide, an alkoxide functionality comprising between about 1 and about 11 carbon atoms, an aryloxide functionality comprising at least about 6 carbon atoms, an aliphatic functionality comprising between about 1 and about 11 carbon atoms, an aromatic functionality comprising at least about 6 carbon atoms, a cycloaliphatic ring comprising at least about 5 carbon atoms, said cycloaliphatic ring being fused to the imidazole ring through an adjacent ring substituent, and a cycloaromatic ring comprising at least about 6 carbon atoms, said cycloaromatic ring being fused to the imidazole ring through an adjacent ring substituent. In one exemplary embodiment, in the structures (I), (II), (III), (IV) and/or (V) above, X is the same as the linking functionality Y.